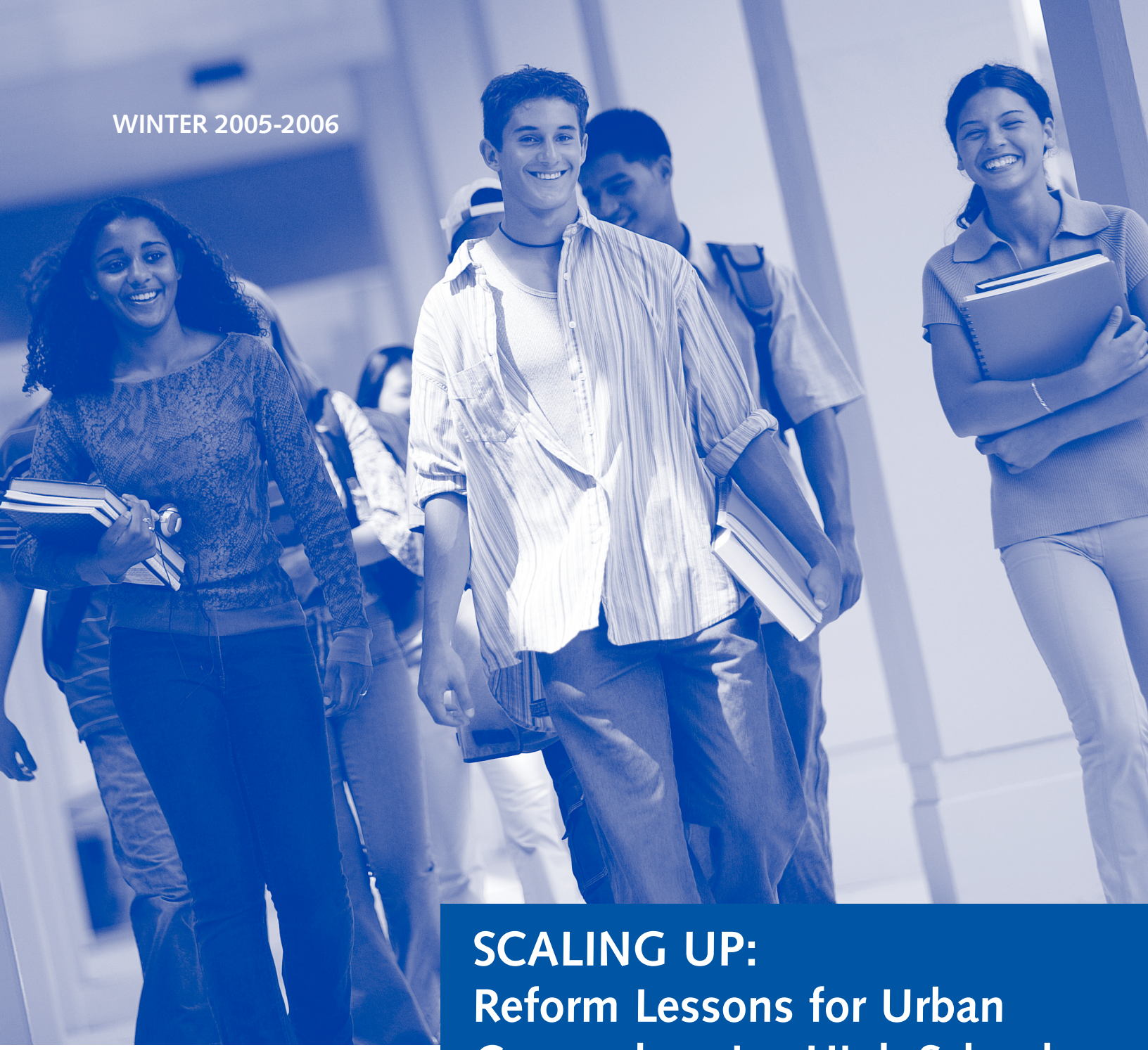

WINTER 2005-2006

SCALING UP: Reform Lessons for Urban Comprehensive High Schools

Rennie Center for Education Research and Policy

Sponsored by the Trefler Foundation

About the Trefler Foundation

The Trefler Foundation is a private charitable organization dedicated to improved educational opportunities for Boston's urban youth. The foundation supports and expands the learning environment for Boston's high school students by promoting partnerships between schools, non-profit and for-profit organizations, and institutions of higher education. The foundation's objective is to provide the necessary framework and resources for students' high academic and personal achievement. For more information on the Trefler Foundation, call 617.454.1135.

About Rennie Center

The Rennie Center's mission is to develop a public agenda that informs and promotes significant improvement of public education in Massachusetts. Our work is motivated by a vision of an education system that creates the opportunity to educate every child to be successful in life, citizenship, employment and life-long learning. Applying nonpartisan, independent research, journalism and civic engagement, the Rennie Center is creating a civil space to foster thoughtful public discourse to inform and shape effective policy.

SCALING UP:
Reform Lessons for Urban Comprehensive High Schools

WINTER 2005/2006

Rennie Center for Education Research and Policy
131 Mount Auburn Street
Cambridge, MA 02138

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Sponsored by the *Trefler Foundation*

Dear Friends,

My colleagues and I are proud to present you with our report entitled *Scaling Up: Reform Lessons for Urban Comprehensive High Schools*. This report, sponsored by the Trefler Foundation, represents the second phase of our ongoing commitment to producing research that informs urban secondary school improvement.

In December 2003, the Rennie Center released *Head of the Class*, a report detailing the characteristics of higher performing high schools in Massachusetts. Of the nine higher performing urban high schools across the state it identified, seven were small schools or charter schools. However, the vast majority of the Commonwealth's urban high school students, over 90% in fact, attend traditional comprehensive high schools with populations over 1,000 students. Too many students are being "left behind" as attention flows to small, boutique schools. Policymakers and education leaders must focus on improvement in the part of the system that has proven most resistant to change— the large, urban high schools that serve large proportions of socio-economically disadvantaged students, students of color, and English language learners.

This report provides an action agenda for taking the lessons of high school reform to scale in comprehensive high school settings. It presents case studies of large urban high schools that demonstrate consistent academic success to illustrate the possible. Further, it synthesizes the voluminous research literature on high school improvement and distills a narrow set of specific lessons in three categories:

- Personalizing the learning environment;
- Building teacher capacity; and
- Setting and meeting high expectations for all students.

Policy recommendations for state policymakers and local education leaders follow each set of lessons.

Finally, I am especially grateful to the Trefler Foundation for their generous support of this project and their insightful advice in shaping it. I also want to thank the Rennie Center's research director, Celine Coggins, for her exhaustive efforts in leading the work on this important project.

Today, at time when the nation's leaders and leaders in the Commonwealth have established high school reform as a top priority, we hope this report can serve as a framework for translating research into changes in policy at the state level and changes in practice in schools and districts.

We hope you find the report interesting and useful.

S. Paul Reville
President

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INTRODUCTION

Policy interest in the challenge of improving urban high schools has grown recently, as high-profile business leaders and politicians have called the preparedness of graduates for college and work into question. The National Governor's Association and President Bush have cited high school reform as a top education priority. Across the nation, foundations, large and small, are attempting to finance a revolution to push the archaic world of secondary education into the 21st century. Still, the majority of urban high school students—those served in large comprehensive high schools—have yet to benefit from their new high profile among politicians and reform funders.

There is widespread agreement that students, particularly low-income and minority students, are not graduating with the skills necessary to compete in the 21st century. There is consensus, too, that traditional, comprehensive high schools—the type that dominate the urban education landscape—are not organized to promote the success of all students. Policymakers are coalescing around the idea that high school reform is of paramount importance, yet it is not clear how to best promote large-scale change at the high school level, or what state or district policy levers will serve as the best catalysts for action in schools.

Mounting evidence suggests that reform at the secondary level is far more complicated than at the elementary level. While several whole-school reforms of the past fifteen years have elicited improved achievement in the lower grades, these reforms have failed to produce similar results in high schools.[1] The momentum of a reform effort often stagnates against the bureaucratic forces of the large urban high school. While one prominent response has been to create new, smaller high schools that are student-centered and free from a history of inertia, this is a solution that impacts only a fraction of urban adolescents.

This report lays out an action agenda for large comprehensive high schools and clarifies what needs to happen at the school, district and state levels in order for sustainable change to take effect. It highlights the lessons that comprehensive high schools must heed in enacting improvement efforts and provides promising examples of urban high schools that are making it possible for all students to achieve at high levels. The report explores three interrelated pieces of the reform puzzle, each of which is an essential component of whole school improvement. They are:

- Personalizing the learning environment;
- Building teacher capacity; and
- Setting and meeting high expectations for all students.

Massachusetts is one of thirteen states that have formed a national coalition to promote higher standards and organizational change in high schools. This report is intended to inform state efforts by serving as a resource in creating a multidimensional blueprint for high school reform.

The Need for Attention to Scale

This report builds on the December 2003 Rennie Center report, *Head of the Class*, which detailed the characteristics of higher performing urban high schools in Massachusetts. It found that few urban schools were consistently producing above average

STUDENTS, PARTICULARLY LOW-INCOME AND MINORITY STUDENTS, ARE NOT GRADUATING WITH THE SKILLS NECESSARY TO COMPETE IN COLLEGE OR THE WORK FORCE.

achievement across their student populations. Further, seven of the nine high schools that were identified as higher performing were either small schools, pilot schools or charter schools. These seven schools differ from the schools that most urban high school students attend in that they are smaller (with mean school size of 442 students), newer, and some are exempt from some of the constraints of typical district governance. By contrast, *Head of the Class* found only two large, comprehensive high schools in the state that could be classified as higher performing.

In Massachusetts, the vast majority of urban high school students attend schools in which enrollments exceed 1,000 students (see Figure 1). In the ten largest urban districts in the state, 90.3% of students attend high schools of 1,000 students or more. In fact, several districts in the state with ninth through twelfth grade populations over 2,500 students send all of those students to a single comprehensive high school (see Figure 2). Too many students are being left behind as attention flows to small, boutique schools. The policy community must fix its sights on improving the part of the system that has proven most resistant to change—the large high schools that serve most urban students.

Figure 1. Size of high school attended by students in the ten largest urban districts in Massachusetts

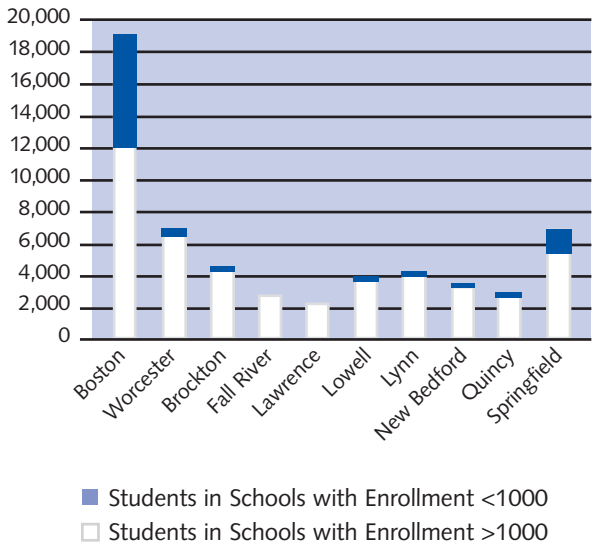
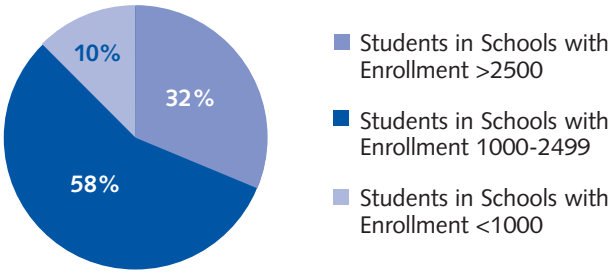


Figure 2. Percentage of students enrolled by high school size: Ten largest urban districts



Head of the Class left two significant policy questions unanswered, and these are the research questions that we take up in this project:

- How can we take the lessons of successful urban high schools to scale?
- What is the role of states and districts in ensuring that all high school students are educated to high standards?

Nationally, there are a small number of comprehensive urban high schools that serve as models for improvement. This report draws on some of the best among those and presents an analysis of the strategies they have used to make change.

IN MASSACHUSETTS, THE VAST MAJORITY OF URBAN HIGH SCHOOL STUDENTS ATTEND SCHOOLS IN WHICH ENROLLMENTS EXCEED 1,000 STUDENTS.

Structure of the Report

This report synthesizes the existing research literature and lays out lessons about the implementation and efficacy of three interrelated reform elements. To reiterate, these elements are:

1. Personalizing the learning environment;
2. Building teacher capacity; and
3. Setting and meeting high expectations for all students.

The body of this report is broken into three sections, one for each of the elements under investigation. Each section has three components:

- **Illustration of a successful urban high school.** Each section begins with an example that demonstrates how a large urban high school has incorporated the given reform element into a successful whole school improvement effort. It shows the three elements at work simultaneously; however, in each case, we pay particular attention to foregrounding one reform element.
- **Lessons that matter for large urban high schools.** This section presents the most compelling research evidence that education leaders and politicians must consider in developing improvement plans. While much research to date comes from small schools and small learning communities, this analysis takes care to focus on lessons that are relevant to all schools, applying lessons from small settings to larger ones.
- **An action agenda for schools, districts and states.** Drawing on the lessons from research, this section defines the steps schools must take to make necessary changes and the role that districts and states must take to facilitate school improvement. Our recommendations encompass both strategies of practice and strategies of policy.

Research for the report took two forms. Case research involved on-site and phone interviews as well as observations at model high schools. Analysis of documents including reform program literature and student test scores supplemented the case studies. Next, comprehensive secondary analysis of the existing research literature on each set of strategies was conducted to provide a deeper and broader insight into the strengths and limitations of each set of reform strategies.

PERSONALIZING THE LEARNING ENVIRONMENT

GOAL

Improve student engagement and motivation through the adoption of personalized learning strategies and structures.

Much of the high school reform focus of late has centered on small schools and small learning communities. This movement is an implicit acknowledgement of the shortcomings of large high schools. However, some prominent funders of high school reform, such as the Bill and Melinda Gates Foundation, are now shifting attention toward working within larger settings to bring their efforts to scale. Evidence suggests that reducing school size or restructuring to create smaller learning communities can benefit students academically as well as socially and emotionally. However, size reduction is not a silver bullet: small schools are effective because they implement a range of strategies to ensure a more personalized experience. Large comprehensive high schools may modify aspects of the existing school environment and adopt personalization strategies used by small schools to provide the supports and experiences necessary to engage young people.

Personalization as Part of Whole School Improvement

Wyandotte High School, Kansas City, Kansas

Approaching Wyandotte on a grey fall day, it appeared to be the prototypical large urban comprehensive high school. It seemed hard to believe that the building, built in the early 20th century, could house a set of vibrant 21st century learning communities. Yet, one step inside revealed community pride around every turn. Immaculate facilities and signs representing the school's eight small learning communities transformed the building into an inviting place.

Background and School Structure

Wyandotte is a school of nearly 1,300 students that has received national attention for its application of smallness principles to an urban, comprehensive high school. The school is divided into eight small learning communities and has been operating that way since it implemented the First Things First (FTF) model in 1998.

First Things First is designed to help schools raise their achievement levels to levels needed for postsecondary education…and high quality employment. FTF aims for this goal even in secondary schools where very large numbers of students perform in the bottom quartile on high stakes achievement tests. [The program] works with partners around three goals: (a) strengthening relationships among students, staff and families; (b) improving teaching and learning in every classroom every day; and (c) reallocating budget, staff and time to achieve the first two goals. To meet these goals, FTF starts by helping schools create a more personalized environment by restructuring them into small learning communities.[2]

Wyandotte uses this approach in a school that serves a population containing 83% economically disadvantaged students and 92% non-white students.[3] The school first began its small learning communities strategy to promote accountability for and among students who once had too many opportunities to "get lost in the shuffle" of a large, anonymous high school.

Principles of Smallness at Wyandotte

While personalized learning environments take many different forms in high schools across the country, the First Things First model has developed specific principles, based on research and practice, to which Wyandotte adheres. Key principles include:

- Each SLC contains between 150 and 200 students.
- Rather than being grouped by grade, each SLC has a distribution of students in grades nine through twelve who stay with one group of teachers for four years.

continued on next page

Personalization as Part of Whole School Improvement, continued

- Students take 75% of their courses within their SLC.
- Teachers teach 90% of their courses within the SLC.
- SLCs are not tracked, but a transitional community for struggling students is available.

The highly-specific approach maximizes continuity in the student's school day and throughout their four years in the school.

Changes in the School

The focus at Wyandotte is improving students' opportunities by improving relationships between students and the adults in their lives. Personalization is formalized through a home-school connection called the Family Advocate System. Each teacher is officially appointed as the advocate for between 15 and 17 students in her SLC. Teacher-advocates make regular calls home, particularly in the case of an unexplained absence, and are the point of contact if grades are slipping. Informally, strong personal relationships between students and teachers are clear in the conversations between teachers and students before and after class, in the respect students afford teachers during lessons. At Wyandotte, relationships are the cornerstone of the teaching and learning process.

Student Outcomes

Teachers at Wyandotte were complacent about student achievement until they began looking at data through their work with the consultants from First Things First. When confronted with the evidence of how their students stacked up, relative to other urban high schools in the state, teachers' sense of urgency and commitment to change grew. Students scoring in the proficient category or above on the Kansas state exam have risen from 25% in 2001 to 40% in 2004.[4] Wyandotte is also closing the achievement gap between white and black students at more than twice their overall improvement rate. In addition, the school is closing the gap between high-income and low-income students faster than the rest of the state.

Though progress is evident now, significant improvement on state tests did not come immediately. The initial indicators of improvement were found in attendance, graduation and dropout rates. Improvement on these indicators continues. Graduation rates are up from just over 50% five years ago to 73% today, and a greater percentage of students are graduating on time. Average daily attendance is 10% higher than five years ago and suspensions are down 35%. Perhaps most significant, the dropout rate has been reduced by more than half—from 15% to 7%.

Lessons

Administrators at Wyandotte believe that the culture of the school changed gradually as teachers began to see improvements in student achievement and attributed those to the FTF model. This led to a deeper level of ownership for the reform. The principal identifies a series of key structures that have led to their progress as a school. Among them are:

- **District central office support.** FTF has been adopted as a districtwide initiative and several central office roles have shifted toward a greater focus on instructional support.
- **Peer coaching.** Wyandotte has instructional coaches for both math and literacy.
- **Learning-focused walkthroughs.** The principal conducts these on a regular basis with district officials, coaches and other interested parties.
- **Weekly early release for staff development.** All teachers have two hours per week of professional development on Wednesday afternoons. Teachers alternately work with other teachers in their SLC and work with other teachers in their content area.
- **Contract flexibility.** If 85% of building staff agree, the contract can be set aside and a new decision made.

All of these structures support and strengthen individual SLCs by providing teachers with the resources and autonomy they need to take responsibility for their small group of students. Ultimately, each member of the district—from senior administrators, to teachers, to students— feels accountable to at least one other member of the system with whom he or she has a relationship.

Lessons that matter for large urban high schools:

1. Personalized learning environments set the conditions for improved achievement. High schools, particularly large comprehensive high schools, have been faulted for years for operating as bureaucratic institutions that inadequately support students' academic or social needs.[5] Evidence about how students become and remain engaged in learning suggests that students are most successful when they have caring relationships with adults in the school community and feel pushed to reach high expectations. Schools that tap students' individual strengths reduce failure and dropout rates among at-risk students.[6]

2. One size does not fit all. Personalization is possible, even in a large urban high school, but approaches to personalization vary. School leaders need to determine which structures and approaches are most likely to work in their schools. Some of the possibilities are included in Table 1.

School leaders must also decide whether a radical or incremental approach to restructuring will work best in their circumstances. Several case studies of small learning communities describe successful fundamental change efforts in which large schools were broken down into smaller autonomous schools or small learning communities. These cases demonstrate that substantial change is possible when political and community support, financial resources, and strong leadership are aligned and committed to a single goal.[7] Other case studies illustrate the virtue of incremental change. For example, Steinberg and Allen[8] described how an isolated, interdisciplinary school-within-a-school program evolved into several different themed academies that allowed the school to personalize all students' experiences.

3. Curriculum planning and professional development must be a part of personalization efforts. Creating or revising structures for greater personalization does not solve the problem of what to teach or how to teach it. A major study of high schools undergoing restructuring with funding from the Bill and Melinda Gates Foundation determined that schools in the sample needed greater assistance with instruction.[9] Specifically, teachers wanted help incorporating project-based learning and interdisciplinary projects with teaching basic skills. Proponents of small schools and personalization have provided examples to support the assertion that high standards and personalization are compatible goals.[10] Yet achieving this balance requires careful planning from the outset.

4. Personalization strategies must fit with state and/or school standards. The strict and extensive curricular requirements of the standards movement are sometimes at odds with the pedagogical underpinnings of personalization.[11] For example, an approach to personalization might involve covering certain topics in depth and pacing based on student needs, yet this might

Table 1. Approaches to Personalization

NAME	DESCRIPTION
Freestanding small schools	Small, autonomous schools with their own facilities, administrators and budgets.
Small learning communities (SLCs)	Small, autonomous schools with their own facilities, administrators and budgets.
Small schools created through conversion	A large school—often with weak student results—closes and later re-opens as a set of autonomous units, often housed within the same building.
Schools-within-schools	Small groups of teachers and students operating within a larger school building. Budgeting and procedural decisions in some cases, are handled by teacher leaders in the smaller unit and, in other cases, are left to the site administrator.
Career/Thematic academies	Career and thematic academies combine the features of small learning communities with student choice. In an academy setting, students take their core courses as well as supplementary courses with a specific occupational or intellectual focus. Courses are designed to connect students' academic programs with their aspirations for the future.

not allow time for all state standards to be covered. The success or failure of a personalization initiative will ultimately be judged, at least in part, on whether student achievement is rising. Emerging research suggests that schools must plan carefully to incorporate accountability requirements and personalization strategies into a unified approach to instruction.[12]

5. Personalization strategies must ensure equity. Schools implementing personalization strategies such as career academies must consider how these structures, designed to promote the achievement of all students, may in fact lead to greater stratification. While theme-based academies engage students by attending to their specific interests[13] schools must be cautioned that differentiating by interest, ability or behavior may inadvertently group students by background characteristics such as race/ethnicity or socioeconomic status.[14]

Action Agenda for Schools, Districts and States

Schools and their leaders must be able to:

- Implement new ways of working including team teaching, looping, advisory periods and personalized learning plans.
- Allocate resources differently to accommodate new schedules and programs within the school.
- Integrate curricular reform (e.g. adopting an instructional program that incorporates the tenants of personalization) with structural reforms (e.g. converting the school into small learning communities).
- Periodically review and refine their work to ensure new structures are equitable and helping students meet standards.

A supportive district would:

- Allow schools the autonomy to experiment with new schedules and personalization plans.
- Monitor results to ensure that new structures enhance educational outcomes.
- Help high schools look for grants and other sources of funding to finance personalization efforts.
- Review high schools' proposals for personalization to ensure they fit with established standards.

The ideal state role involves:

- Conducting and disseminating research on best practices for a personalized high school environment, particularly in larger schools.
- Creating public-private partnerships to provide matching grants to large urban comprehensive high schools that want to break into small learning communities.
- Raising the visibility of improving urban high schools as Massachusetts does through the Compass Schools program.
- Prioritizing state School Building Assistance funds for large comprehensive high schools to create small learning communities.

BUILDING TEACHER CAPACITY

GOAL

Establish a schoolwide focus that emphasizes teacher learning and data-driven decision-making.

Effective school and district improvement efforts have highlighted the central role of teacher learning in improving outcomes for students. Research has demonstrated a solid link between teacher expertise and successful school improvement.[15] Indeed, any reform effort requires that teachers become more skilled practitioners. Increasing teacher capacity—the content and pedagogical knowledge and practical skills necessary for effectively teaching all students—requires attention to both adult learning and student learning. Standards-based reforms ask that teachers help a classroom of children with diverse learning needs and achievement levels to all reach high standards; in turn, teachers require high quality professional support. This "reciprocal process" ensures that as demands on teachers increase, support also increases.[16]

Teacher Capacity Building in the Whole School Improvement Effort

Morse Senior High School, San Diego, California

Background

Morse Senior High School exemplifies the promise of a focus on teacher professional development in a diverse urban school. The San Diego Unified School District has taken a systemwide approach to school change that centers on building the instructional capacity of teachers as a means of improving student achievement. The district has prioritized high school reform since 2001, using the same teacher-centered strategy that it had applied to elementary and middle schools since 1998. The result has been particularly strong growth in schools like Morse that serve large populations of diverse and socio-economically disadvantaged students.[17]

Mechanisms for Improving Instruction

At Morse, the work of all adults in the school is explicitly about improving teaching and learning. Principals, assistant principals, teachers and other staff all participate in ongoing collaboration and professional development focused on specific instructional strategies aligned to the district's curriculum. Skill building takes different forms for administrators and teachers.

Administrators:

- Work with Instructional Leaders (former San Diego principals, themselves) in workshops and in their schools to improve their ability to cultivate high-quality instruction and evaluate its implementation;
- Participate in formal, ongoing learning communities with other district principals; and
- Conduct regular "walk throughs" to observe teaching practice in action.

Teachers:

- Work with certified peer coaches (accomplished former teachers with subject-specific university and in-district training) in their classrooms on an ongoing basis. Coaches observe teachers and facilitate reflection on practice. They also offer to lead demonstration lessons or provide new teaching materials.
- Meet in subject area teams for regular collaboration; and
- Participate in district-sponsored professional development. The district offers up to 150 courses annually.

Coaches:

- Work with teachers at Morse four days per week, spreading ideas to and among teachers; and
- Collaborate with other coaches one day per week to develop new skills and learning.
- All professional development is geared toward emphasizing continuous, context-specific learning.

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Teacher Capacity Building in the Whole School Improvement Effort, continued

The Role of the Central Office

The district central office initiated school level reform in San Diego and has sustained its commitment to improvement by providing tools and supports for teachers and redirecting resources to ensure a focus on instruction. The central office eliminated many administrative positions and replaced them with positions for coaches in the schools. The central office was able to offer detailed data analysis and a wide range of professional development offerings at a scale that schools did not have the capacity to conduct on their own.

Student Outcomes

Morse is an example of a school that is improving the outcomes of all students, while simultaneously closing achievement gaps between white and non-white students as well as between low-income and higher-income students. California ranks school results on state tests against other schools with similar demographics. On this measure, Morse has scored in the top category for three years in a row. The school has met its schoolwide improvement targets for each represented subgroup (African American, Hispanic, Filipino and socioeconomically disadvantaged) for the past two years. The test scores of each of these subgroups are accelerating more quickly than the scores of white and more affluent students.

By the standards established through the No Child Left Behind Act, Morse is also demonstrating substantial growth. The school made Adequate Yearly Progress (AYP) for their overall test scores and for each subgroup in both math and English Language Arts. However, they continue to struggle with graduation rates. The school has a higher percentage of dropouts than the district or state median.

Lessons

Morse is taking an approach that emphasizes teacher learning as a vehicle for improving student learning. It values the professionalism of teachers and provides them the means to build instructional capacity. This approach requires a commitment to continuous improvement on the part of all adults in the system.

- Teachers are the pivotal actors in ensuring that reform affects the bottom line of improving teaching and, ultimately, student achievement;
- The principal must be an instructional leader who takes responsibility for leading and sustaining reform;
- Instructional coaches are needed full-time at the site to develop strong, collegial relationships with the teachers. Coaches are needed in multiple core subject areas; and
- Central office support is critical for providing direction and offering resources, such as professional development and coaches, to the school.

In conclusion, it is important to note that while Morse did not initially focus on personalization of relationships between faculty and students; personalization has become a strategy that the school has incorporated into its reform work more recently.

Lessons that matter for large urban high schools:

1. Teacher capacity is the single greatest determinant of student achievement. Teacher knowledge and skill accounts for a greater percentage of the variance in student achievement than any other factor.[18] One compelling example comes from William Sanders' research, which demonstrated that elementary school children assigned to effective teachers three consecutive years scored an average of 49 percentile points higher on reading exams than children assigned to three ineffective teachers in a row.[19] Teachers are a resource in which all schools need to invest.

2. High school teachers' knowledge of academic content is of paramount importance. Scores of studies of high school teachers have reached similar conclusions about the necessity of strong academic content knowledge for producing strong student achievement.[20] This finding holds across academic subject areas and is particularly the case in math and science—subjects in which many out-of-field teachers are currently assigned courses.[21] As concluded by Walsh and Tracy in their review of the topic, "Strong preparation in a secondary teacher's intended subject area adds significant value."[22]

3. Ongoing professional development designed to meet specific schoolwide goals is a powerful mechanism for improving teacher capacity. Teachers need time together to ensure continuing alignment of their curriculum to the standards. Typical, large comprehensive high schools do not adequately support the development of teacher learning.[23] Schools that are formally broken into small learning communities may find it easier to schedule time for collaboration or professional development.[24] Yet, professional development within the school setting appears to have greater benefits than off-site workshops and institutes.[25] Thus, even large comprehensive high schools must work against the norms of autonomy and isolation that characterize most teachers' experience[26] to create teacher learning networks by grade and subject area, as well as opportunities for peer coaching and mentoring. These sustained forms of professional development that are embedded in the context of the school hold the greatest potential to change instruction among the greatest number of teachers.[27]

4. Teachers who can analyze student achievement data can best tailor instructional decisions to specific student needs. Most teachers have had limited training in statistics and data analysis and often struggle in their initial attempts to use achievement data.[29] However, teachers require empirical data about student learning

Shared Characteristics of Districts Successfully Implementing Instructional Reform

A study of five high-poverty districts making strides to improve student achievement illustrates the ideal role for the district in leading teacher capacity building in schools. The Learning First Alliance study examined: how districts created the will for instructional reform, approaches to professional development, interactions among stakeholders, and leadership for improvement efforts. The successful districts shared the following characteristics:

- Courage to acknowledge low student achievement and the will to improve;
- A systemwide approach to improving instruction;
- A vision for improving student learning through ongoing professional development;
- Data-based decision-making; and
- Innovative approaches to professional development.[28]

in order to target lessons and pin-point areas for intervention. Data can also illuminate gaps in teachers' own professional knowledge and skill. Professional development designed to build teachers' understanding of data builds capacity for instructional improvement in several ways. First, it positions them as leaders in overall school improvement efforts; literature suggests that effective and sustainable school improvement processes require that teachers know how to collect and analyze data and conduct basic program evaluation.[30] Second, practitioners with "assessment literacy" can gather reliable and high-quality information about student achievement and use the assessment data to alter practice.[31] Third, data about the type, frequency and usage of existing professional development opportunities help teachers become better consumers of those opportunities and can help teachers establish goals for their own learning.[32]

5. Effective, collaborative teaching cultures take time to develop. In a reform climate in which immediate results are commonly expected, it is important for school leaders to expect an extended learning curve before teacher collaboration can be traced to clear changes in teacher practice or student outcomes.[33] Trust, open communication, and collegial problem solving are learned behaviors, and they affect the success of professional development.[34] Large comprehensive high schools are more often characterized by conservative cultures that seek to maintain the status quo of limited interaction with colleagues.[35] McLaughlin and Talbert also warn that not all unified teaching communities serve the best interests of students; some are held together by a belief that setting low expectations for disadvantaged students will make it easier for them to succeed.[36] Existing norms must be unlearned in order for real collaboration to work.[37]

6. Outside experts AND teachers inside the school can make valuable contributions to the design and delivery of professional development. Teachers possess knowledge and skills in evaluating students' instructional needs and identifying the professional opportunities to best support those needs.[38] For example, one study of successful school restructuring found that reform efforts were often driven by teachers.[39] Staff participation in planning professional development can generate commitment to incorporating new practices.[40] Further, both current and former teachers can play leadership roles in a reform effort. As a case in point, coaches, who have expertise about the contexts in which they work, have a level of credibility often denied external staff developers.[41]

Action Agenda for Schools, Districts and States

Schools and their leaders must be able to:

- Provide ongoing opportunities for teachers to collaborate and engage in high quality, content-based professional development.
- Provide opportunities for teachers to practice and refine new techniques with the support of coaches or consultants.
- Ensure that teachers are trained to analyze data and use that analysis in planning instruction.
- Research prospective professional development providers to ensure quality and appropriateness of fit.
- Devote adequate resources to building teacher capacity.

A supportive district would:

- Develop a systemwide approach to curriculum and professional development that is focused on ongoing teacher learning.
- Make teacher learning a funding priority.
- Support schools in making decisions about professional development providers.
- Initiate teacher career advancement opportunities which allow participants to lead professional development in their areas of expertise.
- Schedule regular time in the high school schedule for teacher collaboration and development.

The ideal state role involves:

- Providing policy incentives for schools and districts to engage in ongoing professional development at their sites (e.g. coaching, teacher collaboration), rather than short-term workshops.
- Allowing schools more time to implement instructional reforms before evaluating them and making decisions about their use in the future.
- Providing or brokering training for teachers in data analysis.
- Developing a network of qualified professional development providers and making information on providers' past performance available to school leaders.
- Conducting and disseminating research on the efficacy of different professional development models where possible.

SETTING AND MEETING HIGH EXPECTATIONS FOR ALL STUDENTS

GOAL

Help all students develop the skills they need to succeed in college and work.

While school insiders must be included in the leadership of school improvement efforts, expert outsiders can contribute perspective and strategic support. The research is replete with examples of successful cases of schools partnering with universities or education reform organizations to promote instructional changes and raise student achievement, though not all such ventures are equally productive.[42] External consultants, who work with a school on a regular basis, bring ongoing visibility to the initiative and can help to sustain the involvement of busy principals and/or superintendents over time.[43] Even short-term professional development by outside consultants can spark worthwhile reflection and conversation among a school faculty if opportunities for post-workshop collaboration are scheduled.[44]

The No Child Left Behind Act of 2001 institutionalized school accountability by mandating both state assessment of high school students and intervention for chronically low-performing schools. Even prior to the passage of NCLB, Massachusetts and several other states had enacted accountability laws requiring testing for graduation and sanctioning schools that failed to improve. It is clear that accountability policies and testing mandates are influencing what is taught in high schools.[45] The challenge is ensuring that teachers have the support to teach high-level curricula well. Olympic High School in Charlotte, North Carolina represents one case in which being put on probation for poor performance actually led to positive changes among teachers and in the school environment. Ultimately, outcomes improved for all groups of students.

Accountability as the Catalyst for Whole School Improvement

Olympic High School, Charlotte, North Carolina

Pam Espinoza, the principal of Olympic High School, hurries to the front door of the building with an energy that belies the early hour. It is 7:15a.m. The darkness outside and quiet inside might otherwise suggest that school is not yet in session. However, in this case, school started fifteen minutes ago. The principal explains that five years ago, I would have seen most students congregating in the hall shortly after the first bell, and missed the many others who arrived an hour or more late for school. Improved attendance, punctuality, and discipline are just a small piece of the whole school change process that has occurred at Olympic in the past five years, she explains.

Background and Start of External Intervention

Olympic High School in Charlotte, North Carolina, spent most of the late 1990's vacillating between barely meeting the minimum bar on state accountability tests and failing to meet that minimum bar. A typical urban high school, Olympic housed over 1,500 students and had a population that was mostly non-white and low-income. The school was characterized by high dropout rates, chronically poor attendance, and serious discipline problems. It was declared chronically underperforming by the state and, during the 2000-2001 school year, worked with an external assistance team on an intensive school turnaround process. In the four years since the intervention by the assistance team, the school's scores on state tests have consistently risen, along with evidence of improvement on a number of other academic indicators. The Olympic story is one of few examples that exist nationally of a successful, sustainable high school turnaround process.

An assistance team began at Olympic at the start of the 2000-2001 school year because the school had been declared underperforming. Just weeks into the year, test results from the previous spring were released, revealing more weak scores. The district superintendent (with the support of the assistance team) fired the current principal and replaced her with Pam Espinoza overnight. Espinoza and the assistance team gelled immediately, though neither she nor the team had the support of the rest of the staff at the outset.

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Accountability as the Catalyst for Whole School Improvement, continued

Role of Assistance Team

Assistance teams in North Carolina are comprised of former teachers and administrators, each with expertise in a different core high school subject area. There were six members on Olympic's assistance team and each one worked full-time in the school for the duration of the 2000-2001 school year. The essence of the work of the assistance team focused on two areas: (1) providing ongoing professional development to the faculty, and (2) observing and doing demonstrations in classrooms as a means of coaching individual teachers. However, their work extended far beyond those roles, as they attempted to change the culture of the school. In the words of Olympic's principal, assistance team members did "anything and everything" from tutoring students after school, to developing a new discipline plan, to resurrecting plans for a school prom that was on the verge of cancellation.

Teachers in the school acknowledge that having outsiders present was viewed as a negative at first because it resulted in "pressure and tension." However, teachers at Olympic characterized this period of skepticism as temporary. In a matter of months, most teachers saw assistance team members as part of the school and trusted them as knowledgeable about teaching. As the school culture became more positive and collegial and students began to improve academically, teachers were willing to acknowledge that having the assistance team members constantly cycling through classrooms, forced them to "have [their] ducks in a row and really do a better job."

Changes in the School

The principal and assistance team worked together to plan a series of changes and a timeline for their gradual implementation. Their first step was to institute a new discipline policy, which set the conditions for improved teaching and learning. The other major change that occurred that year was the implementation of daily common planning time for teachers by subject area. These two changes laid the foundation for change within the student body and change among teachers. The central office supported the improvement process by providing the school (and other schools in the district) with curricular mapping, pacing guides, and "mini-assessments" of five to seven questions to correspond with each content standard.

Demographic Group	African American	Asian	Hispanic	White	Special education	Limited English proficient	Low-income	All students
% on grade level 2000	26.9	43.5	25.7	51.8	10.6	30	26.1	36.8
% on grade level 2003	42.6	60.8	52.5	69.1	31.9	38.1	39.7	55.9
Percent gain	60%	40%	104%	33%	201%	27%	52%	52%

Student Outcomes

Student performance has followed a consistent positive trajectory over the past four years. Whereas in 2000, only 36.8% of students were testing on grade level, by 2003, 55.9% of students were testing on grade level, a gain of 52%. Students in each demographic category are improving, and at the same time, Olympic is narrowing the achievement gap between white regular education students and low-income, non-white and special education students. The school has made the most pronounced gains with its Hispanic and special education students.

Other academic measures indicate progress as well. For the 2003-04 school year, average daily attendance at Olympic was 91.9%. Combined SAT scores had risen 40 points. Further, 91.1% of students achieved proficiency in reading on state tests, and 91.9% of students achieved proficiency in math—and the gap between white and African American students in both reading and math was less than 10 percentage points.

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Accountability as the Catalyst for Whole School Improvement, continued

Lessons

The principal warns that, while the school is making progress, it is still "fragile." Schools generally receive less and less support as they move away from the formal designation of "underperforming," but that often results in backsliding. Olympic had the fortune of having one of the assistance team members accept an administrative position at the school after the team's tenure was complete. This individual has been able to preserve the focus of the turnaround work over the past several years. The principal identified a few key lessons from their experience, including:

- External assistance team members need to stay in the background as much as possible and promote the principal as a leader.
- Administrators need to focus on instructional improvement by frequently observing classrooms and prioritizing teacher collaboration and skill building.
- Most schools, especially high schools, try to do too many programs. They need to streamline.

Olympic is the rare case of successful external intervention in a large comprehensive high school. As more and more schools like it are declared low performing under the provisions of the No Child Left Behind Act, it is critical that the lessons from successful cases are made public.

Lessons that matter for large urban high schools:

1. High stakes accountability pressures have focused attention on the inadequacies of high schools. High school graduation rates have been calculated as low as 68% nationally, with historically disadvantaged students dropping out almost as frequently as they graduate.[48] The stakes attached to testing and accountability systems are also high: roughly fifty percent of all high schools require that students take and pass a high school exit exam.[49] Unfortunately, many students—disproportionately those in large urban high schools—are not being adequately prepared to meet those standards. Approximately 800 high schools nationwide were identified as "in need of improvement" in 2003.[50] Of those, most were large, comprehensive high schools.

2. High school teachers do not always respond to accountability pressures in the manner desired by policymakers. Research in Chicago high schools at high risk for being put on probation by the district central office illustrated the response of some teachers to heightened accountability requirements.[51] To protect against probationary status, teachers used a combination of strategies that included: conducting more explicit test preparation, altering requirements to prevent students from failing, lowering expectations by reducing assignments, or giving lower level work more credit. A review of schools labeled "underperforming" in California also found that teachers shifted to a narrow focus on passing standardized tests, though this led to a tendency to neglect subject areas not tested, like science.[52] Another study of Chicago high schools examined teachers selection of curricular materials and found that teachers selected the instructional approach that most closely fit with their projections of assessment content.[53, 54] High school teachers need time and support to adopt the appropriate strategies and materials to respond to more rigorous requirements.

3. A singular focus on improving instruction may unify a large school faculty. Creation of a school improvement plan does not ensure improvement.[55] School plans are notorious for encompassing every aspect of a school's work and having many different priorities. Plans devised collaboratively with high school teachers may be particularly guilty of this problem.[56] Research suggests that schools targeted for improvement should focus on improving teaching and learning.[57] High schools prone to developing multiple and diverse improvement goals may find that designing an entire plan around increasing achievement in literacy and math better keeps the focus on instruction. School plans that emphasize teacher learning will likely have greater impact than plans that attempt comprehensiveness.[58]

4. Intensive intervention may be necessary in chronically low performing high schools, but it is unclear what strategies work best. Emerging research reveals (1) that standards, assessments and intervention mechanisms ensure that schools and districts that have been previously ignored now receive attention and (2) that probationary status may increase energy, effort and engagement among practitioners in targeted schools. However, the punitive aspects of accountability systems—such as reconstitution, state takeover or loss of accreditation—trigger fear, frustration and unproductive blame shifting at the local level.[59] The problems associated with the most aggressive forms of intervention are becoming clearer. Consider the research on three intervention approaches that are used with increasing frequency (see Table 2).

The advantages of each intervention strategy must be carefully weighed against potential unintended negative consequences.

5. External partners may be a valuable resource in improving a low performing high school, though qualified partners may be hard to find. Implementation of a major overhaul of curriculum or another radical adjustment to school function will require ongoing professional development to be successful.[63]

External partners can help to support a school through a transition, but the needs of high schools are complex. Because improving a high school means improving more than a half-dozen separate disciplinary departments, the task may be difficult for one provider to handle. Further, improving the quality of teaching and learning means more than changing curriculum, it also involves developing collaborative relationships with colleagues.[64] The current pool of external partners available to do the complex work of turning around a chronically low performing high school is disorganized and of variable quality and capacity.[65]

Table 2. Intervention Approaches and Their Potential Drawbacks

ACCOUNTABILITY MECHANISM	THEORY OF CHANGE	CONSIDERATIONS
Reconstituting staff	Improve quality of teaching staff; remove teachers who are barriers to improvement	May result in a loss of effective teachers, influx of inexperienced new teachers[60]
Replacing leaders	Leader sets tone for the school and its improvement process	Based on possibly-faulty assumption that the individual leader is the primary problem[61]
State or mayoral takeover	Chronic underperformance warrants loss of autonomy from state or local accountability agency	Mayoral takeover found ineffective at raising achievement at secondary level; exit from school takeover is difficult[62]

Action Agenda for Schools, Districts and States

Schools and their leaders must be able to:

- Maintain a clear focus on students and the factors that impact student learning.
- Continually analyze student data to monitor progress.
- Recruit and retain high quality teachers and leaders in low performing high schools.
- Adequately support teachers to ensure that they understand why the school is considered low performing, what remediation is required, and why their participation in the improvement effort matters.

A supportive district would:

- Take an active role in mediating state and federal mandates to high schools by providing information and support to sites. Raise expectations and support simultaneously.
- Create a sense of urgency around improvement based on student data.
- Assist schools in collecting, interpreting and using data, and completing accountability reporting requirements where possible.
- Consider converting the school to a within-district charter schools to allow it to exercise greater control in decision-making.

The ideal state role involves:

- Committing resources to urban high school improvement.
- Developing a pool of turnaround partners to support intervention into low performing high schools. Some members of this pool should include coaches with subject-specific expertise.
- Launching an aggressive turnaround program in a small number of comprehensive high schools that have been identified as low performing for multiple consecutive years.

  Under the No Child Left Behind Act, the state is obligated to provide assistance to schools declared underperforming, yet such assistance has not yet been provided to failing high schools. The Department of Education, along with expert partners, should work with select schools to develop and implement a technical assistance system. Some of the large urban schools that have been identified as "in need of improvement" for repeatedly not making adequate yearly progress include: The English High School in Boston, Hyde Park High School in Boston, and Lynn Vocational Technical High School.
- Researching the outcomes of different intervention models in different contexts to determine which interventions are most likely to remedy which problems in schools.
- Facilitating the conversation of comprehensive high schools to within-district charter schools.

LEADERSHIP: A UNIFYING REFORM ELEMENT

It is important to note that the theme of leadership was an inescapable common denominator in each of our three case studies and in the research literature on the three reform elements herein. Educational leaders, particularly the principals in large urban high schools, are critical to getting any reform package to take root and thrive in the school. Reform efforts wither without leaders to promote a clear vision and instill a constant sense of urgency about the work. Leaders with these skills are not in sufficient supply in large urban high schools; incentivizing the work to attract more of them is critical to the ultimate success of urban high school reform.

STRONG PRINCIPAL LEADERSHIP IS CRITICAL TO IMPROVEMENT, BUT QUALIFIED LEADERS FOR URBAN HIGH SCHOOLS ARE IN SHORT SUPPLY.

CONCLUSION

Massachusetts, like other states, is struggling with the challenge of reforming its large, comprehensive high schools to create learning environments that are conducive to effective teaching and learning. As noted in our prior study, *Head of the Class*, we were only able to identify two "higher" performing, non-selective, comprehensive high schools in the Commonwealth, serving a large proportion of non-white and low-income students. Despite a decade of committed reform efforts, the vast majority of our high school students are still not achieving at high academic levels. The Commonwealth's commitment to provide equitable, high-quality educational opportunities to all students has not yet been fulfilled. This represents a clear threat to the success and well-being of our students and the vitality of our future workforce. Addressing the persistent decline at the high school level must be viewed as a priority by the Commonwealth.

As we consider the examples from this report, it is apparent that effective high school reform is happening and that the education community has lessons to share with those working to scale the success of those efforts. However, it is important to note that high school reform, particularly in large urban settings, is an exceedingly complex venture. Our efforts to synthesize the literature and distill explicit policy recommendations in this report in no way suggest that the work of reform is easy or linear.

The three reform elements outlined here—personalization, teacher capacity building, and meeting high standards—provide the underpinnings of a complete agenda for high school reform. We must continue to build on the ambitious reform efforts that have been undertaken in Boston and Worcester with their high school conversion initiatives and work to create personalized, effective learning communities in schools.

HIGH SCHOOL IMPROVEMENT MUST BE VIEWED AS A TOP PRIORITY IN THE COMMONWEALTH

The intent of this report was to provide policymakers and educational leaders in Massachusetts with an action agenda for high school reform that builds on key research findings and examples of success. We believe that incorporating these three reform elements into a unified vision for school improvement will allow urban high schools to fulfill their commitment to students.

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